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**CBIRF initiated, MCSC, ONR &  
TSWG supported  
Individual Protective Requirements  
16 & 17 Oct 2002**



# Established April 1996

## Per CMC Planning Guidance



### Current Mission Statement

When directed, forward-deploy and/or respond to a credible threat of a **Chemical, Biological, Radiological, Nuclear, or High Yield Explosive (CBRNE)** incident in order to assist local, state, or federal agencies and designated CINCs in the conduct of consequence management operations by providing capabilities for **agent detection and identification; casualty search, rescue, and personnel decontamination; and emergency medical care and stabilization of contaminated personnel.**



# PARTNERSHIP

- **Marine Corps Systems Command, CBIRF, Technical Support Working Group, ONR, NIOSH & Others.**
- **Improve Research Development and Acquisition of equipment.**
- **Delivery of near term equipment solutions to operators.**



## FY02&03 CURRENT PROJECTS

Improved filter

Re-hydration

Heat index

- Why?
- Extended strength, ability & mental acuity
- Increased Operational Endurance
- Improved Life Saving Capability





# Improved Filter Canister

- **Broad protection from War Gases & TIC's**
- **All agent concentrations at IDLH levels**
- **Tested at realistic Human respiration rates of Volume & Velocity**
- **Cyclic Human respiration rates from 50 to 700 LPM**
- **In 50 LPM increments**
- **Military Mask & PAPR applications**
- **Filter canister failure times in minutes**
- **NavAirSysCom testing of actual Marines respiration cycles**
- **Commercial testing of actual Marines respiration cycles**



# Re-Hydration in PPE

- **Extend strength, endurance and mental acuity while down range**
- **Hands free drinking system**
- **Adaptable to participating COTS SCBA's Rebreathers & PAPR's**
- **Allow for re-hydration w/face blanks of COTS masks**



# Heat Index Calculator

- **Determine Max safe down range times for first responders in PPE**
- **Prevent heat related injuries**
- **Input for onsite weather conditions**
- **Input for the level of PPE worn**
- **Input for work level intensity**
- **Slide rule/Whiz Wheel/Calculator, hand held configuration**





# Status Report

## •Improved Filter Requirement

Currently statements of work are under revision by SBCCOM, TSWG, ONR & NIOSH. These agencies are fully engaged in the supervision of this important initiative. During 17 thru 20 Sep 2002, respiration testing was completed at CBIRF in order to establish the respiration rates of Marines engaged in the Fire Fighters agility test, Decontamination operations & Recon Operations. This evaluation established the High, Medium & Light respiration parameters to be utilized in the pending filter testing.

## •Re-Hydration in PPE

A recent operational evaluation of the industry submissions for mask face blanks w/hydration porting & water bladders was completed on 9 Oct 2002 at CBIRF. Command recommendations were forwarded to the manufacturers.

## •Heat Index Calculator

The final selection is currently under review by the Command.





# Points of Contact

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